Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An isolated nucleic acid comprising any one of SEQ ID NOs: 1-4, or a full length complement thereof, ~~encoding a polypeptide with~~ wherein said isolated nucleic acid encodes ABCA12 ~~function~~.

Claim 2 (canceled)

Claim 3 (currently amended): An isolated nucleic acid comprising a nucleic acid sequence that has at least 80% nucleotide identity with a nucleic acid comprising any one of SEQ ID NOs: 1-4, or a full length complement thereof, wherein a polypeptide encoded by said isolated nucleic acid or complement thereof binds ATP, comprises a transmembrane domain, is an ABCA member or a combination thereof~~, encoding a polypeptide with ABCA12 function~~.

Claim 4 (previously presented): The isolated nucleic acid according to claim 3, wherein the nucleic acid sequence has at least 85% nucleotide identity with the nucleic acid comprising any one of SEQ ID NOs: 1-4.

Claim 5 (currently amended): The isolated nucleic acid of claim 3, wherein said ~~An~~ isolated nucleic acid is at least 1,000 nucleotides in length ~~that~~ and hybridizes in 5X SSC at 60°C with a nucleic acid comprising any one of SEQ ID NOs: 1-4, or a full length complement thereof~~, encoding a polypeptide with ABCA12 function~~.

Claim 6 (canceled)

Claim 7 (currently amended): A nucleotide probe or primer specific for the ABCA12 gene, wherein the nucleotide probe or primer ~~comprises no more than 50~~ consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30, 35, 40, 45, 50, 70, 80, 100, 200 or 500 consecutive nucleotides of a nucleotide sequence of any one of SEQ ID NOs: 1-4, or a full length complement ~~thereof~~ of said probe or primer.

Claim 8 (currently amended): A nucleotide probe or primer specific for the ABCA12 gene, wherein the nucleotide probe or primer ~~comprises~~ consists of a nucleotide sequence of any one of SEQ ID NOs: 7-38, or a full length complement thereof.

Claim 9 (original): The nucleotide probe or primer according to any of claim 7 or 8, wherein the nucleotide probe or primer comprises a marker compound.

Claims 10-11 (canceled)

Claim 12 (original): A kit for amplifying the nucleic acid according to claim 1, wherein the kit comprises: a) two nucleotide primers whose hybridization position is located respectively 5' and 3' of the region of the nucleic acid; and optionally, b) reagents necessary for an amplification reaction.

Claim 13 (currently amended): The kit according to claim 12, wherein the two nucleotide primers are selected from the group consisting of a) a nucleotide primer ~~comprising no more than 50~~ consisting of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30, 35, 40, 45, 50, 70, 80, 100, 200 or 500 consecutive nucleotides of a nucleotide sequence of any one of SEQ ID NOs: 1-4, or ~~of~~ a complementary nucleotide sequence thereof, and b) a nucleotide primer ~~comprising~~ consisting of a nucleotide sequence of any one of SEQ ID NOs: 7-38, or a complementary sequence thereof.

Claims 14-15 (canceled)

Claim 16 (previously presented): A kit for detecting the nucleic acid according to claim 1, wherein the kit comprises a) a nucleotide primer as in claim 7 or a nucleotide primer as in claim 8, and optionally, b) reagents necessary for a hybridization reaction.

Claim 17 (original): The kit according to claim 16, wherein the probe is immobilized on a support.

Claim 18 (previously presented): A recombinant vector comprising the nucleic acid according to claim 1.

Claim 19 (original): The vector according to claim 18, wherein the vector is an adenovirus.

Claim 20 (original): A recombinant host cell comprising the recombinant vector according to claim 19.

Claim 21 (previously presented): An isolated recombinant host cell comprising the nucleic acid according claim 1.

Claim 22 (original): An isolated nucleic acid encoding a polypeptide comprising an amino acid sequence of any one of SEQ ID NO:5 or 6.

Claim 23 (original): A recombinant vector comprising the nucleic acid according to claim 22.

Claim 24 (previously presented): An isolated recombinant host cell comprising the nucleic acid according to claim 22.

Claim 25 (previously presented): An isolated recombinant host cell comprising the recombinant vector according to claim 23.

Claim 26-40 (canceled)

Claim 41 (previously presented): The isolated nucleic acid according to claim 3, wherein the nucleic acid sequence has at least 90% nucleotide identity with the nucleic acid comprising any one of SEQ ID NOs: 1-4.

Claim 42 (previously presented): The isolated nucleic acid according to claim 3, wherein the nucleic acid sequence has at least 95% nucleotide identity with the nucleic acid comprising any one of SEQ ID NOs: 1-4.

Claim 43 (previously presented): The isolated nucleic acid according to claim 3, wherein the nucleic acid sequence has at least 98% nucleotide identity with the nucleic acid comprising any one of SEQ ID NOs: 1-4.

Claims 44-46 (canceled)

Claim 47 (currently amended) The isolated nucleic acid according to claim ~~52~~, wherein the nucleic acid comprises at least 1,500 consecutive nucleotides.

Claims 48-50 (canceled)

Claim 51 (previously presented): The isolated nucleic acid according to claim 5, wherein the nucleic acid comprises at least 1,500 nucleotides.

Claim 52 (currently amended): The probe or primer according to claim 7, wherein the probe or primer ~~comprises no more than 40~~ consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30, 35, 40 consecutive nucleotides.

Claim 53 (currently amended): The probe or primer according to claim 7, wherein the probe or primer ~~comprises no more than 35~~ consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30 or 35 consecutive nucleotides.

Claim 54 (currently amended): The probe or primer according to claim 7, wherein the probe or primer ~~comprises no more than 25~~ consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24 or 25 consecutive nucleotides.

Claim 55 (currently amended): The probe or primer according to claim 7, wherein the probe or primer ~~comprises no more than 20~~ consists of 8, 9, 10, 12, 15, 18, 19 or 20 consecutive nucleotides.

Claim 56 (currently amended): The kit according to claim 13, wherein the primer of ~~step~~ (a) ~~comprises no more than 40~~ consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30, 35, 40 consecutive nucleotides.

Claim 57 (currently amended): The kit according to claim 13, wherein the primer of ~~step~~ (a) ~~comprises no more than 35~~ consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30 or 35 consecutive nucleotides.

Claim 58 (currently amended): The kit according to claim 13, wherein the primer of ~~step~~ (a) ~~comprises no more than 25~~ consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24 or 25 consecutive nucleotides.

Claim 59 (currently amended): The kit according to claim 13, wherein the primer of ~~step~~ (a) ~~comprises no more than 20~~ consists of 8, 9, 10, 12, 15, 18, 19 or 20 consecutive nucleotides.

Claim 60 (currently amended): The kit according to claim 16, wherein the probe or primer of ~~item (1) comprises no more than 40~~ (a) consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30, 35, 40 consecutive nucleotides.

Claim 61 (currently amended): The kit according to claim 16, wherein the probe or primer of ~~item (1) comprises no more than 35~~ (a) consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 30 or 35 consecutive nucleotides.

Claim 62 (currently amended): The kit according to claim 16, wherein the probe or primer of ~~item (1) comprises no more than 25~~ (a) consists of 8, 9, 10, 12, 15, 18, 19, 20, 21, 22, 23, 24 or 25 consecutive nucleotides.

Claim 63 (currently amended): The kit according to claim 16, wherein the probe or primer of ~~item (1) comprises no more than 20~~ (a) consists of 8, 9, 10, 12, 15, 18, 19 or 20 consecutive nucleotides.